

## AB123. 230. Fragility hip fracture & mortality: a 4-year single institution, multiple surgeon and retrospective cohort study

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**Background:** Fragility hip fractures are the most common serious injury of our older patients. Due to increasing life expectancy worldwide, the current global prevalence of hip fractures (~2 million) is predicted to increase threefold by 2050. Recent studies show that hip fracture registries may be contributing to a reduction in 30-day mortality. The objective of the present study was threefold: (I) to assess the local hospital compliance with international hip fracture quality care standards over the years 2013–2016; (II) to establish the local hospital inpatient, 30-day and 1-year mortality rates for a 4-year cohort of fragility hip fracture patients (n=646 patients); and (III) to perform a logistical regression analysis to ascertain associations between patient and organisational variables and increased risk of death within 1-year post fragility hip fracture in our cohort.

**Methods:** The local hip fracture database was investigated to establish the number of patients who had suffered a fragility hip fracture in the years 2013–2016 (4-year retrospective single-centre multi-surgeon cohort) in Tallaght University Hospital (n=646). The local hospital hip fracture dataset was used to assess both annual and overall compliance with each of the 6 quality care standards. Access to the National Irish Death Events Registry was granted

to establish each death event to establish short and long term mortality rates. A univariate and multivariate logistic regression analysis was performed to determine associations, if any, between patient or organisational specific variables and mortality within the 1st year post fragility hip fracture.

**Results:** Local hospital compliance in Blue Book Standards 1, 3, 4 and 6 were disappointing. Standards 2 and 5 were more positive with annual improvements year-on-year. The mean and median lengths of stay were significantly increased in comparison to national and international figures. The mean 30-day mortality rate was 4.3%. The mean inpatient mortality rate was 5.9%. The mean 1-year mortality rate was 19%. The patient specific variables: (I) age (OR 1.484, 1.130–1.948, P=0.004), (II) nursing home admission source (OR 2.691, 1.376–5.259, P=0.004) and (III) American Society of Anaesthetics (ASA) grade (OR 3.328, 1.855–5.967, P=0.000) demonstrated statistically significant associations with mortality at 1-year on multivariate logistic regression analysis.

**Conclusions:** It is an exciting time for fragility hip fracture care internationally. It is possible that this cohort are benefiting from ~30 years of rigorous audit and international collaboration in the form of national registries. The mortality rate estimates of 10% at 30-days and 30% at 1-year may be out-dated. Further improvements in hip fracture care quality indicators are expected by the authors in light of increased involvement of the orthogeriatric subspeciality and the continuous refinement process of the national registries. The results of 7 novel national pilot registries are anticipated.

**Keywords:** Hip fracture; Irish hip fracture database; mortality; registries

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